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Secretary for
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Air Resources Board

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Arnold Schwarzenegger
Governor

July 18, 2007

To: All Off-Highway Recreational Vehicle Manufacturers and Interested Parties:

The purpose of this notice is to request comments on the modification to the Off Highway Recreational Vehicle (OHRV) test plan. Please find a copy of OHRV test plan at: <http://www.arb.ca.gov/msprog/offroad/orrec/orrec.htm>.

Background

On September 6, 2006, Air Resources Board (ARB) held a work shop in Sacramento where comments were heard for OHRV test plan. Subsequently, some issues were raised regarding the load profile for the running loss test. Due to cost and time limitations, a modified Urban Dynamometer Driving Schedule (UDDS) is being used to load the equipment during running loss tests. The alternative load profiles and the advantage and disadvantages of those being evaluated are discussed below:

1. Operate the vehicle on a transient speed profile where the dynamometer inertia weight and/or power absorber load can be adjusted to closely match the power required for a UDDS test.
 - Advantages:
 1. During acceleration the load will accurately represent the loads of UDDS (discrepancies during deceleration are not important to running loss).
 2. By controlling load and dynamometer speed all load values can be obtained.
 - Disadvantages:
 1. A human driver has to drive the equipment over this load profile.
 2. Human drivers will introduce error into the results.
2. Calculate the power requirement at each time step on the driving profile and set the load on the dyno to match that predicted load. OHRV will be operated at a constant engine speed for this kind of test.

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- Advantages :
 1. This allows the engine and dynamometer speed to be kept nearly steady.
 2. The entire load profile and throttle position can be remotely computer controlled
- Disadvantages:
 1. The parasitic loads inherent to the dyno will not allow power levels below about 1 hp to be realized; therefore, smaller equipment would be loaded proportionally greater.
- 3. The third option is to operate the equipment on a three section stepped load profile where the load values are averages of the power requirement calculated from the UDDS. The three sections will be:
 1. Average from the initial 190 seconds
 2. Average for seconds 191 to 310
 3. Average for seconds 310 seconds to the end
- Advantages:
 1. Allows the engine and dynamometer speed to be kept nearly steady. By doing so the effects of inertia are greatly reduced.
 2. The entire load profile and throttle position can be remotely computer controlled.
 3. Allows use of a single speed fan for cooling.
 4. Most repeatable
- Disadvantages:
 1. Least representative of actual UDDS

At this point, ARB intends to use the third option. The cooling fan will be a two speed fan that can be used for the three speed averages.

Other Test Plan Modifications

Other test plan modifications include:

- A section that evaluates carburetor spillage due to tipping was added.
- Ethanol fuel testing for the predictive model was added.
- Snowmobile testing was eliminated.
- The Running Loss and Hot Soak procedures were modified.
- Minor wording changes.

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In order to initiate testing as soon as possible, please provide written comments by Friday August 3, 2007.

Please send all comments to:

ARB, MLD
Attention: Pippin Mader
P.O. BOX 2815
Sacramento, CA 95812

If you have questions regarding the OHRV test plan, please contact Pippin Mader, at (916) 322-8930 or via email at pmader@arb.ca.gov, or me at (916) 327-1282 or via email at jwatson@arb.ca.gov.

Sincerely,

/s/

Jim Watson, Manager
Engineering and Development Testing Section
Monitoring and Laboratory Division